



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105**

APR 29 2014

Via email and certified mail

**CERTIFIED MAIL NO. 7013 1090 0000 1618 6371  
RETURN RECEIPT REQUESTED  
In Reply Refer to:  
Puna Geothermal Venture**

Cliff Townsend  
Plant Manager  
Puna Geothermal Venture  
P.O. Box 30  
Pahoa, HI 96778

**Subject: Finding of Violations, Section 112(r) of the Clean Air Act, and Request for Information**

Dear Mr. Townsend:

On August 20-21, 2013, representatives of the United States Environmental Protection Agency ("EPA") conducted an inspection of the Puna Geothermal Venture ("PGV") facility located at 14-3860 Kapoho Pahoa Rd., Pahoa, HI (the "facility"). The inspection was triggered by March 13 and April 2, 2013 releases of hydrogen sulfide ("H<sub>2</sub>S") from the facility. The inspection focused on the facility's compliance with the Clean Air Act's ("CAA's") General Duty Clause ("GDC") [Section 112(r)(1)] and Risk Management Program ("RMP") [Section 112(r)(7) and its implementing regulations at 40 CFR Part 68]. A copy of the inspection report is enclosed for your information and response (Enclosure 1).

The facility is subject to the GDC in that hydrogen sulfide ("H<sub>2</sub>S"), an extremely hazardous substance, is produced from the geothermal reservoir and is present at the facility. The GDC, which was enacted by Congress in 1990, is designed to minimize the probability and consequences of accidental chemical releases to better protect workers, communities and the environment. Specifically, the GDC requires facilities that produce, use or store extremely hazardous substances to: 1) identify hazards which may result from such releases; 2) design and maintain a safe facility taking such steps as are necessary to prevent releases; and 3) minimize the consequences of accidental releases which do occur. Per EPA guidance,<sup>1</sup> owners and operators who have these substances must adhere, at a minimum, to any government regulations as well as recognized industry standards and practices in order to be in compliance with the GDC.

In addition, the facility is subject to regulation under the RMP because of its use, handling and storage of pentane above the threshold quantity, a regulated flammable substance and a fluid used in the facility's geothermal power production process. RMP requirements that apply to the

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1- See [www.epa.gov/osweroe1/docs/chem/gdcregionalguidance.pdf](http://www.epa.gov/osweroe1/docs/chem/gdcregionalguidance.pdf).

facility include those to: 1) develop a hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; 2) develop and implement a prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and 3) develop and implement an emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

As a result of the investigation, EPA finds that the March 13, 2013 H<sub>2</sub>S release was attributable to the tripping of a breaker in the local power grid and that PGV's emergency shutdown and H<sub>2</sub>S abatement systems functioned as designed. However, EPA further finds that PGV has not complied with certain requirements under both RMP and GDC statutory and regulatory provisions. These violations are fully described in the enclosed Finding of Violations ("FOV") (Enclosure 2) which provides notice to PGV of the violations discovered through the investigation. EPA notes that most of the violations pertain to RMP requirements, that most of these are past violations that were corrected in 2010, and that, in general, the facility is both well- and safely operated. The FOV does, however, cite certain continuing violations of both RMP and GDC requirements which require correction.

Pursuant to Section 114(a) of the CAA, 42 U.S.C. § 7414(a), the Administrator of EPA is authorized to require any person who owns and/or operates an emission source to establish and maintain records, make reports and provide such other information as he/she may reasonably require for the purposes of determining whether such person is in violation of any provision of the Act. Based on the FOV, EPA is requesting PGV's response to the questions outlined in the enclosed Information Request (Enclosure 3).

Please note that failure to respond fully and truthfully may result in enforcement action by EPA pursuant to Section 113(a)(3) of the CAA, 42 U.S.C. § 7413(a)(3). This statutory provision authorizes EPA to seek penalties up to \$37,500 for each day of noncompliance. Please be further advised that provision of false, fictitious, or fraudulent statements or representations may subject PGV to criminal penalties under 18 U.S.C. § 1001. Failure to comply with Section 112(r) of the CAA may potentially result in enforcement action by EPA. Section 113 of CAA (42 U.S.C. § 7413) permits EPA to seek civil and/or criminal penalties for failure to comply with the General Duty Clause and/or the Risk Management Program requirements of CAA Section 112(r). Issuance of this FOV does not prejudice EPA's rights or authority to bring an enforcement action for violations of the CAA.

Please provide a written response to the information request within thirty (30) days of receipt of this letter. Electronic submittals are acceptable. PGV's response should be sent to:

Jeremy Johnstone, Environmental Engineer  
U.S. Environmental Protection Agency (SFD-9-3)  
75 Hawthorne Street  
San Francisco, CA 94105  
[johnstone.jeremy@epa.gov](mailto:johnstone.jeremy@epa.gov)

PGV is entitled to assert a business confidentiality claim, covering all or part of the information which is included in either PGV's response or EPA's inspection report, except that no such claim

can be made with respect to emission data as defined at 40 C.F.R. § 2.301(a)(2). Any such claim should be made in accordance with the procedures described at 40 C.F.R. § 2.203(b). Enclosure 4 provides an outline for the process for asserting and substantiating a business confidentiality claim. EPA will provide the public with information subject to a claim of business confidentiality only in accordance with the procedures set forth at 40 C.F.R. Part 2, Subpart B. EPA may provide the public with any information not subject to such a claim without further notice. The required submission of information pursuant to Section 114 is not subject to the approval requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. § 3501, *et seq.*

Also, EPA has created a number of helpful resources for small businesses. EPA has established the National Compliance Assistance Clearinghouse as well as Compliance Assistance Centers which offer various resources to small businesses. PGV may inquire about these resources at [www.epa.gov/rfa/index.html](http://www.epa.gov/rfa/index.html). In addition, the EPA Small Business Ombudsman may be contacted at [www.epa.gov/sbo](http://www.epa.gov/sbo).

Questions about the legal aspects of this investigation should be directed to Ms. Rebekah Reynolds, Assistant Regional Counsel, U.S. EPA Region 9, at (415) 972-3916 or [reynolds.rebekah@epa.gov](mailto:reynolds.rebekah@epa.gov). The Region 9 technical contact for this matter is Mr. Jeremy Johnstone, who can be reached at (415) 972-3499 or [johnstone.jeremy@epa.gov](mailto:johnstone.jeremy@epa.gov).

I look forward to PGV's response and working with PGV to ensure future compliance at and safe operation of the facility.

Sincerely,



Enrique Manzanilla  
Director  
Superfund Division

Enclosures (4):

- 1) Inspection Report
- 2) Finding of Violation
- 3) Information Request
- 4) Business Confidentiality Information

cc (via email w/enclosures, excluding inspection report):

B. Ekimoto, HIDOH  
G. Kosaki, HI County FD



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

Enclosure 2  
Finding of Violations  
Puna Geothermal Venture  
14-3860 Kapoho Paho Rd., Paho, HI 96778

CAA Section 112(r)(1), General Duty Clause (GDC)  
CAA Section 112(r)(7) & 40 Code of Federal Regulations (CFR) Part 68, Risk Management Program (RMP)

As a result of a hydrogen sulfide (H<sub>2</sub>S) release at Puna Geothermal Venture's (PGV's) Paho, HI facility (the Facility) on March 13, 2013 the U.S. Environmental Protection Agency (EPA) began an investigation of PGV's compliance at the Facility with Clean Air Act (CAA) Section 112(r), as amended, 42 U.S.C. § 7412(r) and associated implementing regulations at 40 CFR Part 68. EPA reviewed PGV's implementation of its RMP for its covered pentane process at the Facility, and also evaluated PGV's compliance with the GDC with respect to its H<sub>2</sub>S management and abatement activities. As specified below, EPA has identified numerous instances at the Facility where PGV violated CAA requirements with respect to RMP and GDC.

**SUMMARY OF FINDINGS**

<b><i>Summary of Findings under CAA §112(r)(7) &amp; 40 CFR Part 68, Risk Management Program</i></b>		
<b><i>CAA Finding No.</i></b>	<b><i>Description</i></b>	<b><i>Citation</i></b>
1	Applicability	40 CFR § 68.10
2 - 3	Hazard Assessment	40 CFR §§68.25 & 68.30
4	Process Safety Information	40 CFR § 68.65
5	Process Hazard Analysis	40 CFR § 68.67
6 - 8	Operating Procedures	40 CFR § 68.69
9 - 10	Mechanical Integrity	40 CFR § 68.73
11	Compliance Audits	40 CFR § 68.79
12	Employee Participation	40 CFR § 68.83
13	Risk Management Plan	40 CFR § 68.160

<b><i>Summary of Findings under CAA §112(r)(1), General Duty Clause</i></b>		
<b><i>CAA Finding No.</i></b>	<b><i>Description</i></b>	<b><i>Citation</i></b>
14	Maintain a safe facility taking such steps as are necessary to prevent accidental releases of extremely hazardous substances	CAA §112(r)(1)

## **CAA 112(r)(7) RMP FINDINGS:**

### **FINDING 1: APPLICABILITY (40 CFR §68.10)**

***Requirement found at Subpart A – General – Applicability, 40 CFR § 68.10(d) and 68.10(d)(2).*** A covered process is subject to Program 3 if (1) the process does not meet the eligibility requirements for Program 1 and (2) the covered process is subject to the OSHA process safety management standard.

- EPA's review of hazard assessments conducted by the Facility pursuant to 40 CFR § 68.25 prior to June 2010 indicates that the Facility failed to properly identify public receptors within the distance to endpoint from the worst-case release scenario analysis. Additionally, the Facility's pentane process is subject to the OSHA process safety management standard.
- **Finding 1:** Prior to June 2010, PGV failed to identify that it was subject to Program 3 requirements as required under 40 CFR § 68.10(d).

### **FINDINGS 2 - 3: HAZARD ASSESSMENT (40 CFR §§ 68.25 & 68.30)**

***Requirement found at Subpart B – HAZARD ASSESSMENT, 40 CFR § 68.25(b)(1).*** The owner or operator shall analyze and report in the RMP for Program 3 processes worst-case release scenario analysis that is estimated to create the greatest distance in any direction to an endpoint resulting from an accidental release of the greatest amount of a flammable substance held in a single vessel.

- EPA's review of hazard assessment worst-case release scenario analyses conducted by the Facility pursuant to 40 CFR § 68.25 prior to June 2010 indicates that PGV failed to properly locate, in its worst-case release scenario analysis, the single vessel containing the greatest amount of a flammable substance, which resulted in the mistaken conclusion that the distance to endpoint did not potentially impact a public receptor.
- **Finding 2:** Prior to June 2010, PGV failed to properly analyze and report in the RMP the worst case release scenario, as required under 40 CFR § 68.25.

***Requirement found at Subpart B – HAZARD ASSESSMENT, 40 CFR § 68.30(a).*** The owner or operator shall estimate in the RMP the population within a circle with its center at the point of the release and a radius determined by the distance to endpoint defined in 40 CFR § 68.22(a).

- EPA's review of hazard assessment worst-case release scenario analyses conducted by the Facility pursuant to 40 CFR § 68.25 prior to June 2010 indicates that PGV failed to properly place the center of the circle at the location of point of the release at the single vessel containing the greatest amount of a flammable substance, which resulted in the mistaken conclusion that the distance to endpoint did not potentially impact a public receptor.
- **Finding 3:** Prior to June 2010, PGV failed to properly estimate in the RMP the population within a circle with its center at the point of the release and a radius determined by the distance to endpoint defined in § 68.22(a), as required under 40 CFR § 68.30(a).

#### **FINDING 4: PROCESS SAFETY INFORMATION (40 CFR § 68.65)**

**Requirement found at Subpart D – Prevention Program – Process Safety Information, 40 CFR § 68.65.** The owner or operator shall complete a compilation of written process safety information before conducting any process hazard analysis required by the rule. 40 CFR § 68.65(a). The process safety information shall include information on the equipment in the process (including) relief system design and design basis. 40 CFR § 68.65(d)(iv).

- EPA's investigation indicates that, prior to December 2010, PGV failed to have documentation pertaining to the design basis of the relief system.
  - **Finding 4:** Prior to December 2010, PGV failed to contain in its process safety information documentation as to the design basis of the relief system, as required under 40 CFR § 68.65.

#### **FINDING 5: PROCESS HAZARD ANALYSIS (40 CFR § 68.67)**

**Requirement found at Subpart D – Prevention Program – Process Hazardous Analysis, 40 CFR § 68.67(a).** The owner or operator shall perform an initial process hazard analysis (PHA) on all covered processes as soon as possible but not later than June 21, 1999.

- EPA's investigation indicated that, prior to 2009, PGV failed to conduct a PHA on its pentane process.
  - **Finding 5:** Prior to 2009, PGV failed to conduct an initial PHA on its pentane process, as required under 40 CFR § 68.67(a).

#### **FINDINGS 6 - 8: OPERATING PROCEDURES (40 CFR § 68.69)**

**Requirement found at Subpart D – Prevention Program – Operating Procedures, 40 CFR § 68.69(a)(1).** The owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address.... (1) Steps for each operating phase: (including) (vii) start-up following a turnaround.

- **Finding 6:** Prior to July 2010, PGV's written operating procedures did not include procedures for a start-up following a turnaround, as required under 40 CFR § 68.69(a)(1)(vii).

**Requirement found at Subpart D – Prevention Program – Operating Procedures, 40 CFR § 68.69(a)(2).** The owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address.... (2) Operating limits: (i) Consequences of deviation.

- **Finding 7:** Prior to July 2010, PGV's written operating procedures did not include information pertaining to the consequences of deviation, as required under 40 CFR § 68.69(a)(2)(i).

**Requirement found at Subpart D – Prevention Program – Operating Procedures, 40 CFR § 68.69(a)(3).** The owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address.... (3) Safety and health

considerations: (i) properties of, and physical hazards presented by, the chemicals used in the process; and (ii) precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment.

- **Finding 8:** Prior to July 2010, PGV's written operating procedures did not include i) information pertaining to safety and health considerations of the process with respect to the physical hazards presented by the chemicals used in the process, and ii) precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment, as required under 40 CFR § 68.69(a)(3)(i) & (ii).

#### **FINDINGS 9 - 10: MECHANICAL INTEGRITY (40 CFR § 68.73)**

**Requirement found at Subpart D – Prevention Program – Mechanical Integrity, 40 CFR § 68.73(d)(3).** The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.

- EPA's investigation indicated that PGV did not always adhere to the inspection and test frequencies set out in its mechanical integrity (MI) program, for example: (1) A function test of the Facility's UV/IR flame detectors and alarm panel is supposed to be performed monthly, yet between 11/15/2012 and 8/15/2013 only four such tests were performed; (2) Ultrasonic testing of pressure vessel wall thickness is supposed to be performed annually, yet no such tests have been performed since 2006; and (3) Pressure relief devices on pressure vessels are supposed to be inspected and tested every one to three years depending upon type of application and service, yet a review of Facility work orders indicates frequent divergences from the intervals set out in PGV's MI program.
- **Finding 9:** PGV failed to perform inspections or tests on process equipment consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience, as required under 40 CFR § 68.73(d)(3).

**Requirement found at Subpart D – Prevention Program – Mechanical Integrity, 40 CFR § 68.73(d)(4).** The owner or operator shall document each inspection and test that has been performed on process equipment. The documentation shall identify the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test.

- EPA's investigation indicated that the Facility's work order tracking system did not always provide all required information, particularly with respect to information relating to inspection or test results.
- **Finding 10:** PGV failed to document the results of inspections or tests performed on process equipment, as required under 40 CFR § 68.73(d)(4).

#### **FINDING 11: COMPLIANCE AUDITS (40 CFR § 68.79)**

**Requirement found at Subpart D – Prevention Program – Compliance Audits, 40 CFR § 68.79(a).** The owner or operator shall certify that they have evaluated compliance with the

provisions of the prevention program at least every three years to verify that the developed procedures and practices are adequate and being followed.

- **Finding 11:** Prior to June 2010, PGV failed to conduct a compliance audit of its prevention program, as required under 40 CFR § 68.79(a).

#### **FINDING 12: EMPLOYEE PARTICIPATION (40 CFR § 68.83)**

***Requirement found at Subpart D – Prevention Program – Employee participation, 40 CFR § 68.83(a).*** The owner or operator shall develop a written plan of action regarding the implementation of the employee participation under 40 CFR § 68.83.

- **Finding 12:** Prior to July 2010, PGV failed to have a written employee participation plan of action, as required under 40 CFR § 68.83(a).

#### **FINDING 13: RISK MANAGEMENT PLAN (40 CFR § 68.160)**

***Requirement found at Subpart G – Risk Management Plan - Registration 40 CFR § 68.160(b)(7).*** The RMP's registration shall include the following data... (7) for each process... the Program level of the process.

- **Finding 13:** Prior to November 17, 2010, PGV failed to identify the correct Program level for its covered process, as required under 40 CFR § 68.160(b)(7).

#### **CAA 112(r)(1) GENERAL DUTY CLAUSE FINDING:**

#### **FINDING 14: FAILURE TO MAINTAIN A SAFE FACILITY**

***General Duty Clause Requirement found at CAA § 112(r)(1).*** Owners and operators of stationary sources producing, processing and storing extremely hazardous substances have a general duty to identify hazards associated with an accidental release, design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur.

- EPA's investigation of PGV's H<sub>2</sub>S handling and abatement system revealed the shortcomings outlined below.
  - The Process and Instrumentation Diagrams (P&IDs) that EPA reviewed were dated March 1993 and were difficult to read. Several drawings include hand-written comments that suggest physical changes have been made to the system that have not been incorporated in revised drawings.
  - Standard Operating Procedures provided for the system described steam H<sub>2</sub>S concentrations as 700-800 ppm, but recent production well steam analyses and recent incident evaluations by PGV show values in excess of 1000 ppm.
  - Preventive maintenance (PM) of critical system components was not performed in accordance to frequencies established in PGV's system mechanical integrity program. For example:
    - PM on the 15% caustic flow meters (FT-4216A/B) and flow control valve (FV-4216) was not performed in 2012;



- PM on the SulfaTreat H<sub>2</sub>S neutralization 'A' vessel was not completed as scheduled in 2009 and 2011 and PM was not completed on the 'B' vessel in 2008, 2009, and 2012;
  - Calibration of stationary H<sub>2</sub>S detectors was not conducted as scheduled (every two months) in 2011 and 2012;
  - The facility's Jerome H<sub>2</sub>S analyzers are scheduled for calibration monthly and for factory recertification annually, and PM of the FTM (functional test module) is scheduled for calibration annually. However, records reviewed by EPA indicate that only one of the Jerome H<sub>2</sub>S analyzers had been sent out for factory recertification prior to March 2013. Similarly, no PM records were provided to demonstrate that the FTM was calibrated before March 2013. In addition, no PM records were provided that demonstrate that the monthly calibration of the Jerome H<sub>2</sub>S analyzers was performed in the PGV instrument shop before June 2013.
  - PGV's five production wells are supposed to each be maintained with a series of PM activities including: regular stroking of production well master and control valves, valve lubrication, periodic removal and replacement of pressure safety valves, and other typical valve maintenance. Each task is scheduled to be performed either quarterly, semiannually, annually, or every three years. The records reviewed by EPA indicate that, for the five production wells, about 38 (30%) of 125 schedule tasks were not completed as scheduled, and at the time of EPA's inspection almost no tasks scheduled for 2013 had been completed.
  - The Facility's production well flow control valves are on the plant vital energy backup, powered by a diesel generator. This generator is maintained with as many as 10 different PM tasks, scheduled to be completed semi-annually and annually. Records provided for the period 2010-2012 suggest that 7 (18%) of at least 39 PM tasks were not completed as scheduled.
  - The Facility's Casing Monitoring Program (CMP) presumes that "casing failure causing leakage of cool ground water into the wellbore or loss of geothermal fluid to the formation *may be* manifested as a pressure and temperature drop at the wellhead" (emphasis added). Although it is possible that a leak might be indicated by a change in pressure, temperature or fluid chemistry, this is very unlikely unless the leak is very large. Moreover, it is extremely unlikely that loss of geothermal fluid into the formation would result in such changes; there is essentially no chance of a change at the wellhead in chemistry or temperature. Thus, the CMP provides almost no assurance that a casing leak will be detected in the early stage of failure. A small leak would not be detected, and it is at this stage of mechanical failure that the opportunity to mitigate a well blowout remains possible.
- **Finding 14:** PGV has failed to maintain a safe facility taking such steps as are necessary to prevent releases.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105**

**ENCLOSURE 3**

**INFORMATION REQUEST**

Please provide the information requested in this Enclosure within thirty (30) days of your earliest receipt, either by certified mail or email, of this letter and Enclosure.

**INSTRUCTIONS**

1. Please provide a separate response to each request, and identify each response by the number of the request to which it corresponds. For each document produced, identify the request to which it is responsive.
2. Knowledge or information that has not been memorialized in any document, but is nonetheless responsive to a request, must be provided in a narrative form.
3. The scope of this Information Request includes all information and documents obtained or independently developed by the Company, its attorneys, consultants or any of their agents, consultants, or employees.
4. The Company may not withhold any information from EPA on the grounds that it is confidential business information. EPA has promulgated regulations, under 40 C.F.R. Part 2, Subpart B, to protect confidential business information that it receives. The Company may assert a business confidentiality claim (in the manner specified in 40 C.F.R. § 2.203(b)) for all or part of the information requested by EPA. However, business information is entitled to confidential treatment only if it satisfies the criteria set forth in 40 C.F.R. § 2.208. EPA will disclose business information entitled to confidential treatment only as authorized by 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies the information at the time EPA receives it, EPA may make it available to the public without further notice. Enclosure 4 of this package for an outline of the process for asserting and substantiating a business confidentiality claim
5. Pursuant to 40 C.F.R. § 2.310(h) notice is hereby given that EPA may disclose confidential information provided by the Company to EPA's authorized representatives. Confidential information may be disclosed to EPA's authorized representatives for the following reasons: to assist with document handling, inventory and indexing; to assist with document review and analysis for verification of completeness; and to provide expert technical review of the contents of the response. Pursuant to 40 C.F.R. § 2.310(h), the Company may submit, along with its response to this Information Request, any comments regarding EPA's disclosure of confidential information to its authorized representatives.
6. If information or documents not known or available to the Company at the time of its response to this Information Request later become known or available to it, it must supplement its response to EPA. Moreover, should the Company find at any time after the submission of its response that any portion of the submitted information is false or

misrepresents the truth, the Company must notify EPA as soon as possible and provide EPA with a corrected response.

7. If information responsive to a request is not in the Company's possession, custody, or control, identify the persons or entities from whom such information may be obtained. For each individual or entity that possesses responsive information, please provide the following: name, last known or current address, telephone number, and affiliation with the Company or the Facility.
8. If you believe there are grounds for withholding information or documents that are responsive to this request, e.g., attorney-client privilege, you must identify the information or documents and state the basis for withholding.

## DEFINITIONS

The following definitions apply to the following terms (words or phrases) as they appear in this Information Request. Defined terms are enclosed in quotation marks:

1. "You" or the "Company" shall mean Puna Geothermal Venture or its officers, managers, employees, contractors, trustees, partners, successors, assigns, and agents.
2. "Facility" means all buildings, equipment, structures, installations, pipes, or stationary items owned, leased, or operated by the Company, at the property or properties located at 14-3860 Kapoho Paho Rd. in Paho, HI.
3. "Finding of Violations" shall mean the Finding of Violations issued to the Company by USEPA Region 9.
4. "Document" or "documents" shall mean any printing, typing, writing, photostat, or any other copy, microfilm, film record, video record, CD, sound recording, tape, disc, or other type of memory associated with computers, including any instructions necessary to read such material, and any other tangible item recording information.
5. "Chemical" shall mean any extremely hazardous substance listed in Appendices A and B of 40 CFR Part 355; any hazardous substance, as defined in Section 101(14) of CERCLA, including any mixtures of hazardous substances with any other substances, such as petroleum products; and any pollutant or contaminant, as defined in Section 101(33) of CERCLA, including any mixtures of pollutants or contaminants with any substances, such as petroleum products.
6. "Release" shall have the same definition as that contained in Section 101(22) of CERCLA, and shall include any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including the abandonment or discharging of barrels, containers, and other closed receptacles containing any hazardous substances or pollutants or contaminants.
7. All terms not defined herein shall have their ordinary meaning, unless such terms are defined in the CAA, CERCLA, 40 C.F.R. Part 68, or 40 C.F.R. Part 300, in which case the statutory or regulatory definitions shall apply.

## INFORMATION REQUEST

1. Provide a response to each Finding in the Finding of Violations, indicating if the Company agrees or disagrees with the Finding.
  - i. If the Company agrees with the Finding, indicate if the Facility is presently in compliance with the cited requirement.
    1. If the Facility is presently in compliance with the cited requirement: include the following information:
      - a. a description of what activities the Facility undertook to come into compliance; and
      - b. the date on which the Facility came into compliance.
    2. If the Facility is presently not in compliance with the cited requirement:
      - a. indicate what actions the Facility will undertake in order to come into compliance; and
      - b. provide an estimated time by which compliance will be achieved.
  - ii. If the Company disagrees with the Finding provide the basis and supporting documentation for each such assertion.
2. For each Finding in the FOV provide cost information relating to work undertaken, planned, or considered to address identified violations. Cost information may be either actual or estimated and shall be disaggregated by: a) one-time costs (such as for engineering and permitting); b) capital costs (such as for equipment); and c) incremental annual operation and maintenance costs relative to the Facility's level of effort as that existed in January 2010. For each cost item provided indicate if actual or estimated.
3. Provide a statement and supporting documentation indicating both the Company's present net worth and gross revenues for calendar and/or fiscal year 2013.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105**

**ENCLOSURE 4:**

**Confidential Business Information (CBI)  
Assertion and Substantiation Requirements**

**A. Assertion Requirements**

You may assert a business confidentiality claim covering all or part of the information requested in response to this information request, as provided in 40 C.F.R. Section 2.203(b). You may assert a business confidentiality claim covering such information by placing on (or attaching to ) the information you desire to assert a confidentiality claim, at the time it is submitted to EPA, a cover sheet, stamped, or typed legend (or other suitable form of notice) employing language such as "trade secret," "proprietary," or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified, and may be submitted separately to facilitate identification and handling by EPA. If you desire confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state. Information covered by such a claim will be disclosed by EPA only to the extent, and by means of the procedures, set forth in Section 114(c) of the Clean Air Act (the Act) and 40 C.F.R. Part 2. EPA will construe the failure to furnish a confidentiality claim with your response to EPA's request for information as a waiver of that claim, and the information may be made available to the public without further notice to you.

**B. Substantiation Requirements**

All confidentiality claims are subject to EPA verification in accordance with 40 C.F.R. Part 2, Subpart B. The criteria for determining whether material claimed as confidential is entitled to such treatment are set forth at 40 C.F.R. Sections 2.208 and 2.301, which provide, in part, that you must satisfactorily show that you have taken reasonable measures to protect the confidentiality of the information and that you intend to continue to do so; that the information is not and has not been reasonably obtainable by legitimate means without your consent; and the disclosure of the information is likely to cause substantial harm to your business's competitive edge.

Pursuant to 40 C.F.R. Part 2, Subpart B, EPA may at any time send you a letter asking you to substantiate fully your CBI claim. If you receive such a letter, you must provide EPA with a response within the number of days set forth in the EPA request letter. Failure to submit your comments within that time would be regarded as a waiver of your confidentiality claim or claims, and EPA may release the information. If you receive such a letter, EPA will ask you to specify which portions of the information you consider confidential. You must be specific by page, paragraph, and sentence when identifying the information subject to your claim. Any information not specifically identified as subject to a confidentiality claim may be disclosed without further notice to you. For each item or class of information that you identify as being subject to CBI, you must answer the following questions, giving as much detail as possible, in

accordance with 40 C.F.R. 2.204(e).

1. What specific portions of the information are alleged to be entitled to confidential treatment? For what period of time do you request that the information be maintained as confidential, e.g., until a certain date, until the occurrence of a specified event, or permanently? If the occurrence of a specific event will eliminate the need for confidentiality, please specify that event.
2. Information submitted to EPA becomes stale over time. Why should the information you claim as confidential be protected for the time period specified in your responses?
3. What measures have you taken to protect the information claimed as confidential? Have you disclosed the information to anyone other than a governmental body or someone who is bound by an agreement not to disclose the information further? If so, why should the information still be considered confidential?
4. Is the information contained in any publicly available material such as the Internet, publicly available databases, promotional publications, annual reports, or articles? Is there any means by which a member of the public could obtain access to the information? Is the information of a kind that you would customarily not to release to the public?
5. Has any governmental body made a determination as to the confidentiality of the information? If so, please attach a copy of the determination.
6. For each category of information claimed as confidential, explain with specificity why release of the information is likely to cause substantial harm to your competitive position. Explain the specific nature of those harmful effects, why they should be viewed as substantial, and the causal relationship between disclosure and such harmful effects. How could your competitors make use of this information to your detriment?
7. Do you assert that the information is submitted on a voluntary or a mandatory basis? Please explain the reason for your assertion. If you assert that the information is voluntarily submitted information, explain whether and why disclosure of the information would tend to lessen the availability to EPA of similar information in the future.
8. Any other issue you deem relevant

Please note that emission data provided under Section 114 of the Act, 42 U.S.C. Section 7414, is not entitled to confidential treatment under 40 C.F.R. Part 2, Subpart B.

Emission data means, with reference to any source of emission of any substance into the air:

(A) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of any emission which has been emitted by the source (or of any pollutant resulting from any emission by the source), or any combination of the foregoing;

(B) Information necessary to determine the identity, amount, frequency, concentration or other characteristics (to the extent related to air quality) of the emissions which, under an applicable standard or limitation, the source was authorized to emit (including, to the extent necessary for such purposes, a description of the manner and rate of operation of

the source); and

(C) A general description of the location and/or nature of the source to the extent necessary to identify the source and to distinguish it from other sources (including, to the extent necessary for such purposes, a description of the device, installation, or operation constituting the source).

40 C.F.R. Sections 2.301(a)(2)(i)(A), (B), and (C).

If you receive a request for a substantiation letter from the EPA, you bear the burden of substantiating your confidentiality claim. Conclusory allegations will be given little or no weight in the determination. If you fail to claim the information as confidential, it may be made available to the public without further notice to you.